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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,022	05/16/2001	Guy Barre	TS 5549 US	2253

7590

05/11/2004

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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/856,022

Applicant(s)

BARRE ET AL.

Examiner

Walter D. Griffin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 5, 2004 has been entered.

### ***Response to Amendment***

The objection to claim 13 has been withdrawn in view of the amendment filed on April 5, 2004.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/01515 to Moureaux.

The Moureaux reference discloses a process for dewaxing a hydrocarbon that has a sulfur content of less than 1000 ppmw and a nitrogen content of less than 50 ppmw. The process comprises contacting the hydrocarbon with a catalyst comprising a noble metal, a zeolite such as a dealuminated ZSM-5 zeolite, and a silica binder. The ZSM-5 zeolite would necessarily have a constraint index within the claimed range. The dealumination of the zeolite can be achieved by methods disclosed in European patent specification 96921992.2 (EP 0832171 B1). These methods include treatment of zeolite and binder extrudates with an aqueous solution of a fluorosilicate salt. Following the dewaxing, the dewaxed feed is subjected to a hydrotreatment step. See page 9, lines 30-35; page 10, lines 1-3; page 11, lines 9-18 and 30-35; page 14, lines 4-31; page 15, lines 17-35; page 16, lines 1-5; page 21, lines 20 and 21; and page 22, lines 1-11.

The Moureaux reference does not disclose the claimed feeds, does not disclose that the feed contains more than 1000 ppmw of sulfur, and does not disclose the retrofitting process.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing the claimed feeds because these feeds are physically and chemically similar to those disclosed by Moureaux and therefore would be expected to be effectively treated in the Moureaux process.

It also would have been to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing feeds that have more than 1000 ppmw of sulfur because one would expect the process to still effectively convert feeds having slightly more than 1000 ppmw sulfur. Sulfur is a known catalyst poison and one would operate with feeds having slightly more than 1000 ppmw of sulfur if slightly higher catalyst poisoning rates could be tolerated.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by replacing a solvent dewaxing step with the catalytic dewaxing step because Moureaux discloses that solvent dewaxing is necessary if the dewaxing step is not present. Therefore, one would substitute catalytic dewaxing for solvent dewaxing since each type of dewaxing performs an equivalent function.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/01515 to Moureaux as applied to claim 1 above, and further in view of Ward (US 4,743,354).

As discussed above, the Moureaux reference does not disclose further hydrocracking of the dewaxed product.

The Ward reference discloses the hydrocracking of an effluent from a dewaxing zone. See column 8, lines 28-51.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by hydrocracking the effluent from the dewaxing zone as suggested by Ward because desired products including middle distillates will be produced.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/01515 to Moureaux as applied to claim 1 above, and further in view of Abdo et al. (US 4,867,861).

As discussed above, the Moureaux reference does not disclose utilizing nickel in the catalyst.

The Abdo reference discloses dewaxing catalysts that contain noble metals or nickel. See column 11, lines 34-41.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing nickel in the catalyst as suggested by Abdo because nickel has an equivalent function to noble metals such as platinum and therefore would be expected to be effective in the dewaxing catalyst of Moureaux.

Claims 17-25 are rejected under 35 USC 103 as being unpatentable over WO 98/01515 to Moureaux in view of Abdo et al. (US 4,867,861).

As discussed above, the Moureaux reference does not disclose the claimed feeds, does not disclose the claimed sulfur content of the feed, and does not disclose the use of nickel in the catalyst.

The Abdo reference discloses dewaxing catalysts that contain noble metals or nickel. See column 11, lines 34-41.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing nickel in the catalyst as suggested by Abdo because nickel has an equivalent function to noble metals such as platinum and therefore would be expected to be effective in the dewaxing catalyst of Moureaux.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing the claimed feeds because these feeds are physically and chemically similar to those disclosed by Moureaux and therefore would be expected to be effectively treated in the Moureaux process.

It also would have been to one having ordinary skill in the art at the time the invention was made to have modified the process of Moureaux by utilizing feeds that have more than 1000 ppmw of sulfur because one would expect the process to still effectively convert feeds having slightly more than 1000 ppmw sulfur. Sulfur is a known catalyst poison and one would operate with feeds having slightly more than 1000 ppmw of sulfur if slightly higher catalyst poisoning rates could be tolerated.

### ***Response to Arguments***

While it is true that the Moureaux reference discloses a preliminary hydrotreatment, the hydrofinishing step that is performed after the dewaxing step is also a hydrotreating step. Therefore, the examiner maintains that the Moureaux reference discloses the limitation in, for example, claim 12 in which the dewaxed oil is subjected to a hydrotreating step.

The argument that the claimed feeds and feeds disclosed by Moureaux are not similar is not persuasive. Moureaux discloses on page 5 that suitable hydrocarbon oils are mixtures of high

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boiling hydrocarbons such as heavy oil fractions. The examiner asserts that this teaching would suggest to one having ordinary skill in the art to use the claimed feeds in the Moureaux process because the claimed feeds can be characterized as heavy oil fractions. Therefore, the examiner maintains that one of ordinary skill in the art would expect the claimed feeds to be effectively treated in the Moureaux process.

The argument that there is no requirement to hydrotreat the feed that undergoes dewaxing is not persuasive because the claimed process does not exclude additional steps.

The argument that the intermediate hydrotreating step of claim 12 distinguishes over the applied references is not persuasive because Moureaux discloses a hydrotreating step subsequent to the dewaxing step. See, for example, lines 4-12 on page 14. The Ward reference supplies only the missing hydrocracking step.

The argument regarding the use of nickel in the catalyst is not persuasive because the Abdo reference discloses that metals such as the noble metals or metals such as nickel are suitable in dewaxing catalysts. Therefore, the examiner maintains that one would utilize any of these disclosed metals with the expectation of an effective catalyst being produced.

### *Conclusion*

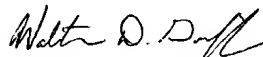
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is (571) 272-1447. The examiner can normally be reached on Monday-Friday 6:30 to 4:00; alternate Fridays off.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Walter D. Griffin  
Primary Examiner  
Art Unit 1764

WG  
May 4, 2004